LEHI NATIONAL GUARD
COOLING ADDITION
DFCM PROJECT #05122470

DFCM DESIGN AND CODE CRITERIA

(Fee A.E: Attach and fill in applicable data for each drawing submittal)

Applicable Codes:	Year		Year
International Building Code	2003	International Mechanical Code	2003
Planning & Design Criteria to Prevent		International Plumbing Code	2003
Architectural Barriers for the Aged and		Ashrae/IES Energy Code	2001
the Physically Handicapped.		National Electrical Code	2002

A. Occupancy and Group : B / S-1

Change in Use : Yes _____ No ✓ Mixed Occupancy : Yes ✓ No _____

B. Type of Construction (Circle)

I	II	II	II	III	III	IV	V	V
F.R.	F.R.	1 HR.	B	1 HR.	N	H.T.	1 HR.	N

C. Location on Property : F.R. Ext. Walls (Hrs.): N.R. Ext. Wall Opening(s) Protection (Hrs.) N.R.

D. Occupancy separation required (Hrs.):
Sprinklered: Indicate Yes or (No)
Stories : (1) or multiple

		%	Area (ft²)	%	Area (ft)	%	Area (ft)
a.	Actual Area²(ft)						
b.	Basic allowable area : N/A		17,000 SF				
c.	Allowable Area Increase due to side yards: N/A		N.A.				
d.	Side yard area increase (ft):		N.A.				
	Accumulative sub-total (b=d):						
	Sprinkler: area increase (x3 single)						
	(x 2 multi)						
e.	Total Allowable Area for a single story:		N.A.				
	x 2 for multi-story building:						
f.	Ratio = a/e (Actual divided by allowable)						

E. Fire-Resistive Requirements (Hrs.): (1 Hr., 2Hr., 3Hr., 4Hr., N. H.T.)

Exterior Bearing Walls:	N	Floors - Ceiling Floors	N
Interior Bearing Walls:	N	Roofs - Ceiling Roofs	N
Exterior Non-bearing Walls:	N	Exterior Doors and Windows	NR
Structural Frame:	N	Shaft Enclosures	N
Partitions - Permanent:	N		

(OCCUPANCY SEPARATION - N.A.)

State of Utah—Department of Administrative Services

DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT

4110 State Office Building / Salt Lake City, Utah 84114 / 538-3018

DRAWING INDEX:

WHW
ENGINEERING INC.
PROFESSIONAL MECHANICAL ENGINEERING
1354 East 3300 South Suite 200
SALT LAKE CITY, UTAH 84106
(801)466-4021, FAX 466-8536
EMAIL: excellence@whw-engineering.com

MECHANICAL ENGINEER
WHW ENGINEERING, INC.
1354 EAST 3300 SOUTH
SUITE 200
SALT LAKE CITY, UTAH 84106
PHONE: (801) 466-4021 FAX: (801) 466-8536

PROFESSIONAL ENGINEER
01/11/06
WINWARD M. PACKER
No. 375080
STATE OF UTAH

GENERAL NOTES:

G-1 MECHANICAL INFORMATION IS NOT LIMITED TO THE MECHANICAL DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMATION ON ALL OTHER CONSTRUCTION DOCUMENTS INCLUDING DRAWINGS BY OTHER DISCIPLINES AND SPECIFICATIONS.

A - EACH DRAWING SHEET AND THE SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND THEY SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH ITEMS SHOWN AND NOTED ON ONE AND NOT THE OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN ALL PLACES. ITEMS IN SPECIFICATIONS OR DRAWINGS LISTED WHICH ARE DIFFERING IN EFFICIENCY OR QUALITY SHALL BE HELD TO THE GREATEST OF: EFFICIENCY, QUALITY OR GOVERNING CODE.

B - THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE INSTALLATION OF THE SYSTEMS ACCORDING TO THE TRUE INTENT AND MEANING OF THE CONTRACT DOCUMENTS.

C - THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT WITH PROPER SERVICE ACCESS AND CLEARANCES ACCORDING TO MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL REVIEW SUPPLIERS BID PACKAGES FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS, SCHEDULES, AND DESIGN INTENT (ALL EQUIPMENT AND METHODS). THE CONTRACTOR SHALL REMOVE AND REINSTALL CORRECTLY AT HIS OWN EXPENSE ANY EQUIPMENT NOT IN COMPLIANCE.

D - THE CONTRACTOR SHALL CONSULT MANUFACTURERS INSTALLATION INSTRUCTIONS FOR SIZES, METHODS, ACCESSORIES, AND CLEARANCES IN SPACE AVAILABLE PRIOR TO BIDDING PROJECT.

E - ANYTHING NOT CLEAR OR IN CONFLICT WILL BE EXPLAINED BY MAKING APPLICATION TO THE ENGINEER IN WRITING.

G-2 ANY AND ALL ALTERATIONS TO THE SYSTEM SHOWN SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR. ENGINEER SHALL BE NOTIFIED IN WRITING PRIOR TO CHANGES.

G-3 CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATIONS.

G-4 THE WORKING DRAWINGS ARE DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND, OR ELBOW NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. ALL LOCATIONS FOR MECHANICAL EQUIPMENT SHALL BE FIELD VERIFIED AND COORDINATED WITH ALL DRAWINGS.

G-5 THE INSTRUCTION TO "PROVIDE" ALSO INCLUDES INSTALLATION.

G-6 MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL SMOKE AND FIRE DAMPERS AS REQUIRED BY LOCAL CODES AND AUTHORITIES.

G-7 SHEET METAL DUCT SIZES SHOWN ON DRAWINGS ARE FREE AREA DIMENSIONS.

G-8 PROVIDE AND INSTALL BALANCING DAMPERS IN ALL SUPPLY BRANCH DUCTS. BALANCE TO CFM SHOWN ON PLAN.

G-9 PROVIDE TURNING VANES IN ALL ELBOWS OF RECTANGULAR DUCT.

G-10 THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY IN HANDLING AND DISPOSING OF REFRIGERANTS, OILS, ETC. ALL SUCH MATERIALS SHALL BE HANDLED, DISPOSED, AND USED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS.

G-11 THE MECHANICAL CONTRACTOR SHALL VERIFY MOTOR VOLTAGES WITH THE ELECTRICAL DRAWING BEFORE ORDERING MOTORIZED EQUIPMENT AND CONTROLS. STARTER HEATER INSTALLED SHALL BE COORDINATED WITH THE NAME PLATE DATA.

G-12 C.F.M. LISTED IS ACTUAL AIR.

G-13 SUPPLIERS SHALL REVIEW ALL DRAWINGS AND THE SPECIFICATIONS PRIOR TO SUBMITTING PRICES TO THE CONTRACTOR. ALL QUESTIONS AND DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEERS ATTENTION PRIOR TO BIDDING.

G-14 CONTRACTOR SHALL THOROUGHLY REVIEW AND SIGN SUBMITTALS FOR COMPLETENESS AND COMPLIANCE TO THE SPECIFICATIONS PRIOR TO ENGINEERS REVIEW. SUPPLIERS SHALL HIGHLIGHT OR MARK ALL INFORMATION REQUIRED TO SHOW COMPLIANCE TO THE SPECIFICATIONS. ALL REQUESTED EXCEPTIONS TO THE SPECIFICATIONS, OR SCHEDULES SHALL BE CLEARLY NOTED AND EXPLAINED. SUBMITTAL REVIEW AND ACCEPTANCE IS FOR DESIGN CONCEPT ONLY, AND DOES NOT AT ANY TIME RELIEVE THE CONTRACTOR OF RESPONSIBILITY TO MEET SPECIFICATIONS, CAPACITIES, OR DESIGN INTENT.

G-15 ALL MECHANICAL SHALL BE INSTALLED AND CONFORM TO THE 2003 EDITION OF THE IMC AND IPC WITH UTAH ANNOTATIONS.

MECHANICAL LEGEND

SYMBOL	ABR.	DESCRIPTION
GENERAL TERMINOLOGY		
A / ME-101		SECTION LETTER DESIGNATION / SECTION DRAWN ON THIS SHEET
A2		DETAIL NUMBER DESIGNATION / CORRESPONDING WITH GRID LOCATION
AH / 1		MECHANICAL EQUIPMENT DESIGNATION / EQUIPMENT ITEM DESIGNATION
D-1 / CFM		REGISTER, GRILLE OR DIFFUSER DESIGNATION WITH BALANCING CFM LISTED BELOW
R-1		GRILLE, OR LOUVER DESIGNATION WHERE BALANCING NOT REQUIRED
1		REVISION DESIGNATOR AND NUMBER
1		KEY NOTE DESIGNATOR AND NUMBER
	POC	POINT OF CONNECTION
	POR	POINT OF REMOVAL
AFF		ABOVE FINISHED FLOOR
GC		GENERAL CONTRACTOR
MC		MECHANICAL CONTRACTOR
CC		CONTROL CONTRACTOR
EC		ELECTRICAL CONTRACTOR
R		GAS REGULATOR FROM 2LBS TO 4OZ
NIC		NOT IN CONTRACT
NTS		NOT TO SCALE

SYMBOL	ABR.	DESCRIPTION
AIR SIDE		
		NEW AIR DUCT
		RECT. TO RECT. AIR DUCT TAKE-OFF
		RECT. TO RND. AIR DUCT TAKE-OFF
		RND. TO RND. AIR DUCT TAKE-OFF
		RECT. TAKE-OFF AT END OF MAIN
		FLEXIBLE AIR DUCT
		LINED DUCT
		VANED ELBOW
		RADIUS ELBOW
		CONCENTRIC DUCT TRANSITION
		ECCENTRIC DUCT TRANSITION
		FLEXIBLE DUCT CONNECTION
VD		VOLUME DAMPER
		SUPPLY AIR DIFFUSER
		RETURN AIR, FRESH AIR, AND TRANSFER AIR
		RETURN OR OUTSIDE AIR DUCT UP
		SUPPLY DUCT UP
		RETURN OR OUTSIDE AIR DUCT DOWN
		SUPPLY DUCT DOWN
		EXHAUST DUCT DOWN
		ROUND DUCT UP
		ROUND DUCT DOWN
		RAISE DUCT UP
		LOWER DUCT DOWN
		FLEXIBLE DUCT CONNECTION
		PARALLEL BLADE DAMPER
		OPPOSED BLADE DAMPER
		NEW EQUIPMENT
T	T'STAT	WALL MOUNTED THERMOSTAT
SA		SUPPLY AIR
RA		RETURN AIR

SYMBOL	ABR.	DESCRIPTION
WET SIDE		
		UNION
		MANUAL ACTUATOR (BALL, BUTTERFLY, NEEDLE, ETC. VALVES)
	PRV	PRESSURE REDUCING VALVE
	BV	BALL VALVE
		PITCH DOWN
		ELBOW UP
		ELBOW DOWN
		TEE UP
		TEE DOWN
G		NATURAL GAS PIPING
DR		EQUIPMENT DRAIN
HWS		HEATING WATER SUPPLY
HWR		HEATING WATER RETURN
CHWS		CHILLED WATER SUPPLY
CHWR		CHILLED WATER RETURN
HTWS		HIGH TEMPERATURE HEATING WATER SUPPLY
L		REFRIGERANT LIQUID
S		REFRIGERANT SUCTION
		DIRECTION OF FLOW

State of Utah
Department of Administrative Services
Division of Facilities Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114
Phone: (801) 538 - 3018
Fax: (801) 538 - 3267
Internet: http://www.dfcm.state.ut.us

CONSULTANTS

WHW ENGINEERING INC.
PROFESSIONAL MECHANICAL ENGINEERING
1354 East 3300 South Suite 200
SALT LAKE CITY, UTAH 84106
(801)466-4021, FAX 466-8536
EMAIL: excellence@whw-engineering.com

PROJECT NAME & ADDRESS

LEHI NATIONAL GUARD COOLING ADDITION

DFCM No. 05122470

LEHI, Utah

MARK	DATE	REVISION

PROJECT MANAGER: WP
DRAWN BY: STAFF
CHECKED BY: SLW
DATE: 12/30/05
WHW JOB NO.: 05034

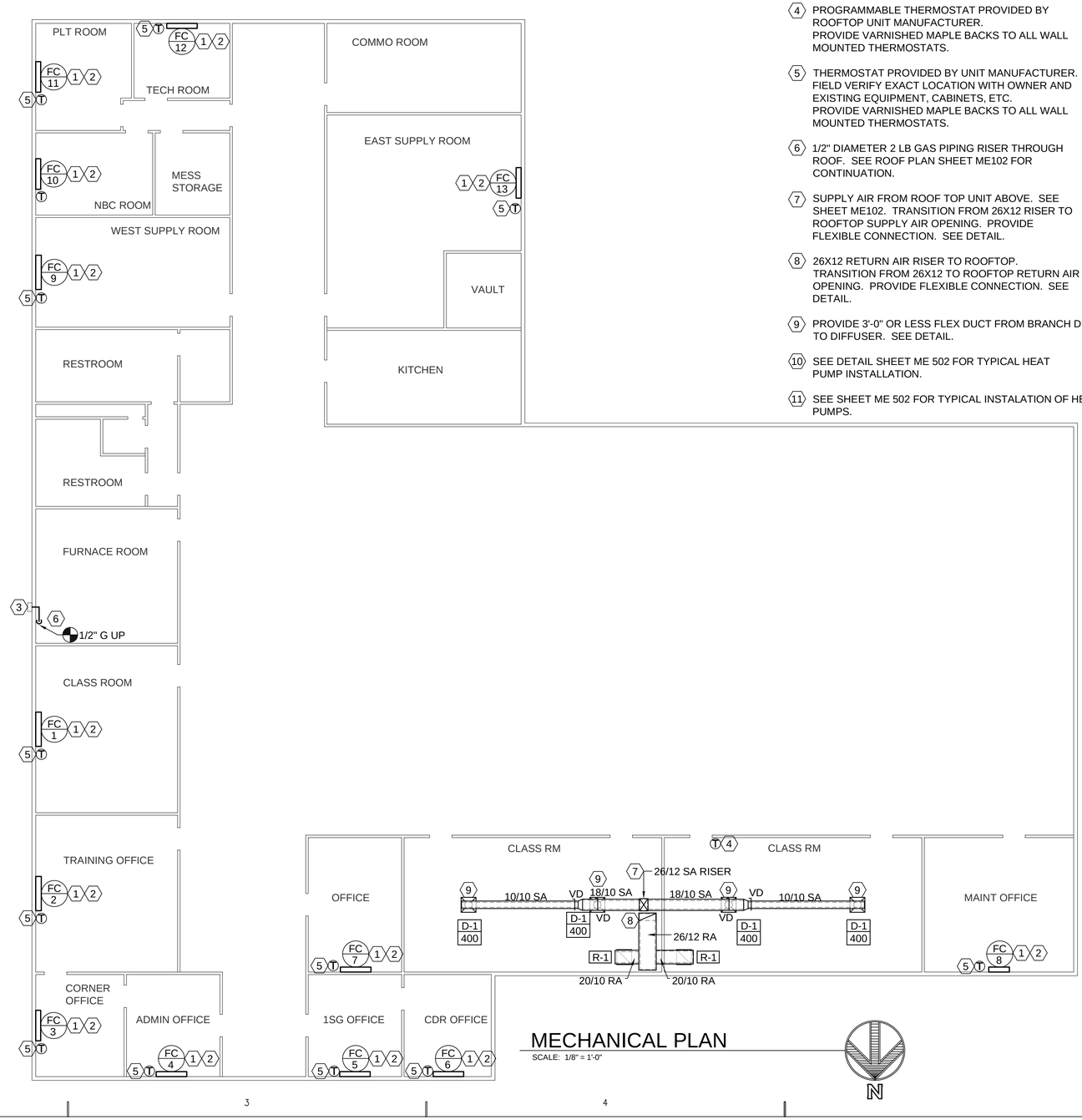
PROFESSIONAL ENGINEER 01/11/06 WINWARD M. PACKER No. 375080 STATE OF UTAH

SHEET TITLE

MECHANICAL LEGENDS AND GENERAL NOTES

SHEET NO.

M001



MECHANICAL PLAN

SCALE: 1/8" = 1'-0"

N

SHEET NOTES

1. ROUTE REFRIGERANT LINE SETS FROM INDOOR HEAT PUMP TO CORRESPONDING ROOF MOUNTED CONDENSING UNITS.
2. ROUTE DRAIN LINE FROM INSIDE UNIT THROUGH EXISTING WALL (CORE DRILL) DOWN WALL AND TERMINATE 12" ABOVE GRADE. SECURE TO WALL AND PAINT PIPING SAME COLOR AS EXISTING WALL.
3. APPROXIMATE LOCATION OF EXISTING GAS METER. TIE IN NEW 1/2" G LINE INSIDE BOILER ROOM.
   NEW LOAD 160 CFH
   PRESSURE: 2 LBS
   TOTAL LOAD 3103 CFH @ 2 LBS.
4. PROGRAMMABLE THERMOSTAT PROVIDED BY ROOFTOP UNIT MANUFACTURER.
   PROVIDE VARNISHED MAPLE BACKS TO ALL WALL MOUNTED THERMOSTATS.
5. THERMOSTAT PROVIDED BY UNIT MANUFACTURER. FIELD VERIFY EXACT LOCATION WITH OWNER AND EXISTING EQUIPMENT, CABINETS, ETC.
   PROVIDE VARNISHED MAPLE BACKS TO ALL WALL MOUNTED THERMOSTATS.
6. 1/2" DIAMETER 2 LB GAS PIPING RISER THROUGH ROOF. SEE ROOF PLAN SHEET ME102 FOR CONTINUATION.
7. SUPPLY AIR FROM ROOF TOP UNIT ABOVE. SEE SHEET ME102. TRANSITION FROM 26X12 RISER TO ROOFTOP SUPPLY AIR OPENING. PROVIDE FLEXIBLE CONNECTION. SEE DETAIL.
8. 26X12 RETURN AIR RISER TO ROOFTOP. TRANSITION FROM 26X12 TO ROOFTOP RETURN AIR OPENING. PROVIDE FLEXIBLE CONNECTION. SEE DETAIL.
9. PROVIDE 3'-0" OR LESS FLEX DUCT FROM BRANCH DUCT TO DIFFUSER. SEE DETAIL.
10. SEE DETAIL SHEET ME 502 FOR TYPICAL HEAT PUMP INSTALLATION.
11. SEE SHEET ME 502 FOR TYPICAL INSTALATION OF HEAT PUMPS.

State of Utah
Department of Administrative Services

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4110 State Office Building
Salt Lake City, Utah 84114
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CONSULTANTS

WHW ENGINEERING INC.
PROFESSIONAL MECHANICAL ENGINEERING
1354 East 3300 South Suite 200
SALT LAKE CITY, UTAH 84106
(801)466-4021, FAX 466-8536
EMAIL: excellence@whw-engineering.com

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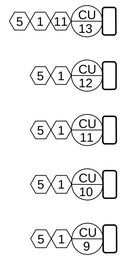
PROFESSIONAL ENGINEER 01/11/06 WINWARD M. PACKER No. 375080 STATE OF UTAH

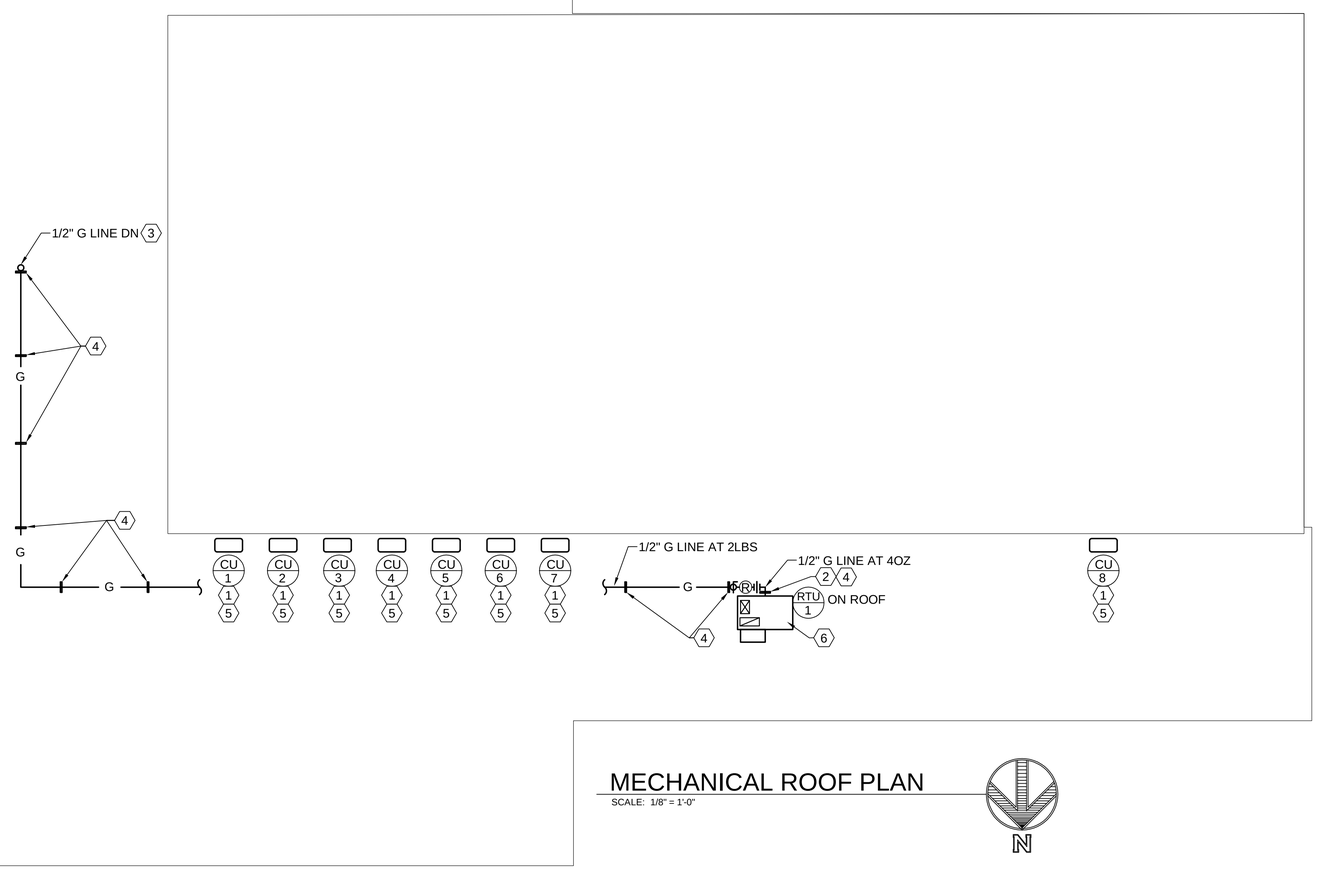
SHEET TITLE

MECHANICAL MAIN LEVEL PLAN

SHEET NO.

ME101





MECHANICAL ROOF PLAN

SCALE: 1/8" = 1'-0"

N

SHEET NOTES

1. ROUTE REFRIGERANT LINE SETS FROM INDOOR HEAT PUMP TO CORRESPONDING ROOF MOUNTED CONDENSING UNITS.
2. SEE DETAIL FOR TYPICAL GAS CONNECTION TO ROOFTOP UNIT.
3. 1/2" 2 LB GAS LINE FROM BOILER ROOM BELOW. SEE SHEET ME101 FOR CONTINUATION. ROOF PENETRATION - USE BOOT AND SEAL AIR AND WATER TIGHT.
4. PROVIDE ROOF GAS SUPPORTS. SEE DETAIL. SPACE @ 6'-0" O.C. AND AT BOTH SIDES OF 90 DEG. ELLS.
5. PROVIDE ROOF BOOTS FOR ALL REFRIGERANT PIPING THRU ROOF. SEAL AIR AND WATER TIGHT.
6. CUT NEW OPENING IN ROOF AND NEW ROOFING MATERIAL. INSTALL NEW CURB. USE EXISTING ROOF CONTRACTORS TO MAINTAIN ROOFING WARRANTEE.

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Construction & Management
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SALT LAKE CITY, UTAH 84106
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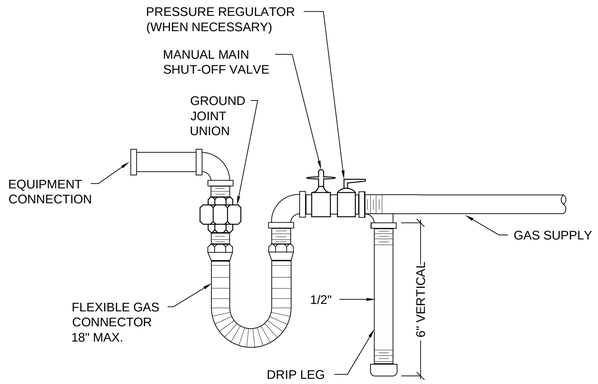
WINWARD M. PACKER
No. 375080
STATE OF UTAH

SHEET TITLE

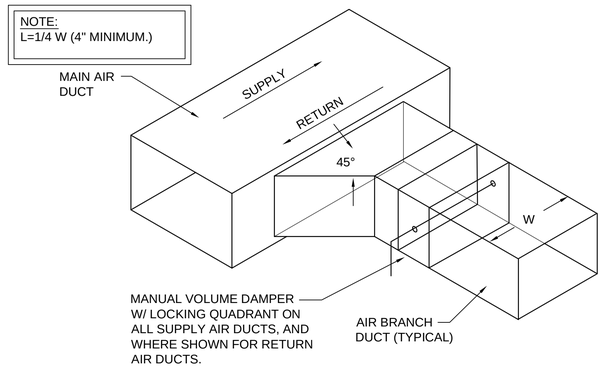
MECHANICAL ROOF LEVEL PLAN

SHEET NO.

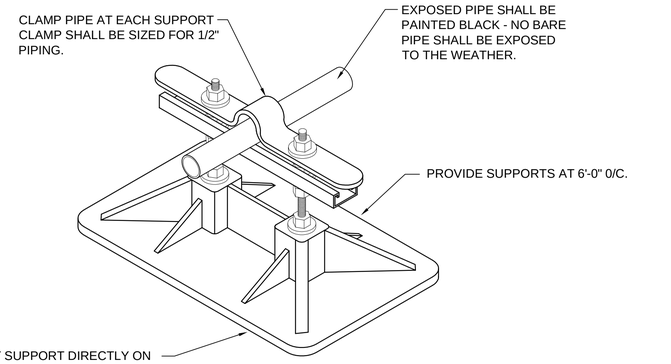
ME102



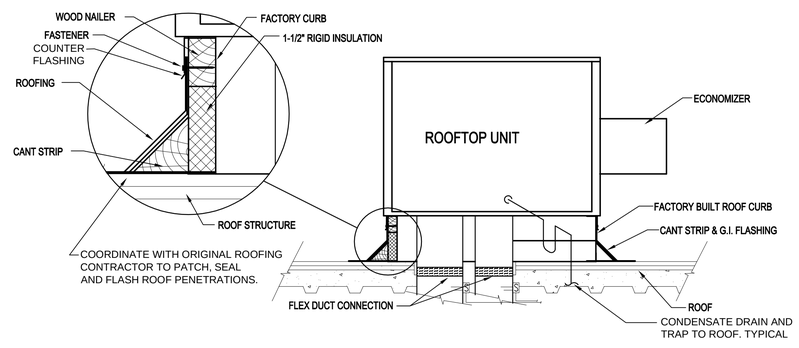
D1 GAS LINE CONNECTION DETAIL
SCALE: NONE



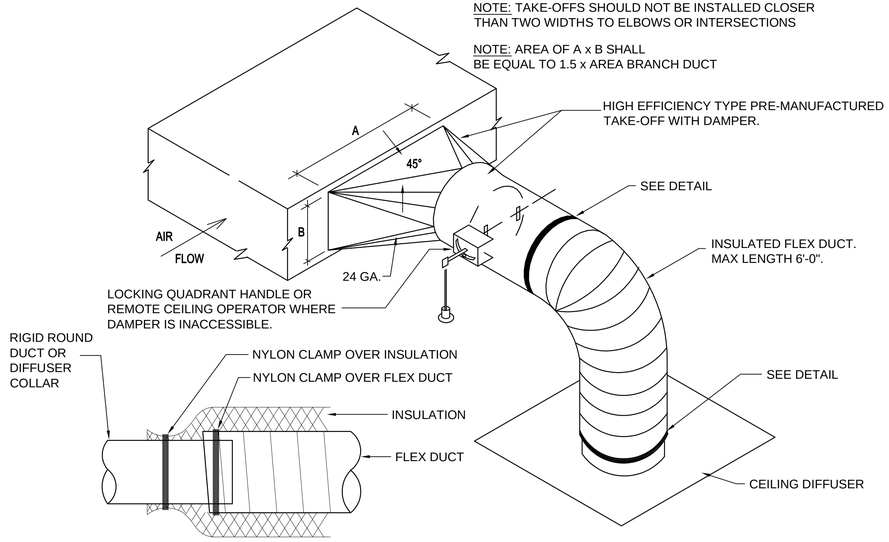
C4 BRANCH DUCT TAKE-OFF & DAMPER DETAIL
SCALE: NONE



B2 GAS SUPPORT ON ROOF DETAIL
SCALE: NONE



A2 ROOFTOP UNIT DETAIL
SCALE: NONE



DETAIL
SCALE: NONE

A5 SQUARE-TO-ROUND TAKE-OFF DETAIL
SCALE: NONE

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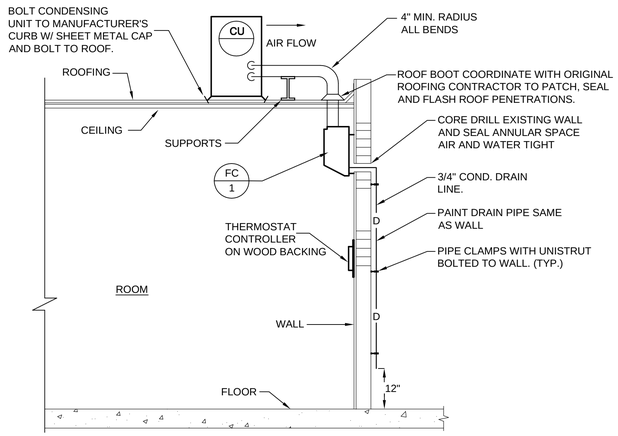
01/11/06
WINWARD M. PACKER
No. 375080
STATE OF UTAH

SHEET TITLE
MECHANICAL DETAILS

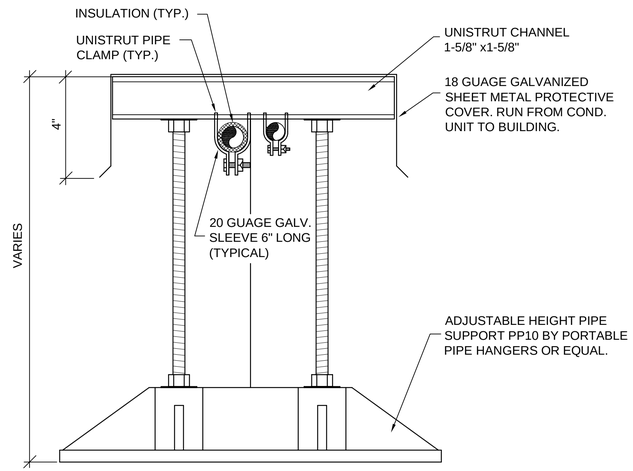
SHEET NO.
ME501

NOTE:
DRY-CHARGED LINE SETS ARE AVAILABLE IN LENGTHS OF 16, 22, 32, & 49 FEET. LENGTHS SHALL BE AS SHORT AS POSSIBLE. COILING OF LINES THAT ARE TOO LONG WILL NOT BE ACCEPTABLE AND WILL BE REPLACED AT THE CONTRACTORS EXPENSE. OPTIONAL: HARD REFRIGERANT PIPING. ALL CONNECTIONS ARE TO BE FLARED. CONTRACTOR MAY ALSO USE HARD PIPE AND FITTINGS. SEE SPECIFICATIONS FOR PIPE AND INSULATION.

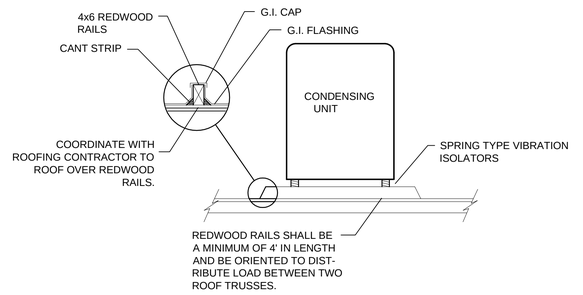


C4 WALL MOUNT AC UNIT DETAIL
SCALE: NONE

NOTE:
RUN STEEL COVER CONTINUOUS FROM CONDENSING UNIT TO RISERS OR PENETRATIONS AT BUILDING WALL OR ROOF.



A3 EXTERIOR REFRIGERANT PIPE SUPPORT
SCALE: NONE



A5 ROOFTOP AIR COOLED CONDENSER DETAIL
SCALE: NONE

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SHEET TITLE
MECHANICAL DETAILS

SHEET NO.
ME502

ROOFTOP AIR CONDITIONER SCHEDULE (GAS HEAT)

SYMBOL	MANUFACTURER & MODEL NUMBER	SA CFM	OSA CFM	E.S.P. IN W.G.	HEATING	COOLING			ELECTRICAL								SEER	OPER. WT. (LBS)	COMMENTS	SCHEDULE NOTES
					TOT. MIN. INPUT MBH	AMB. AIR (DB)	AMB. AIR (WB)	MIN. TOTAL MBH	V - Ø - Hz	COMPRESSOR #	COMPRESSOR TOTAL RLA	COMPRESSOR TOTAL LRA	EVAP BLOWER HP	POWER EXHAUST HP	MCA	MOCP				
RT 1	CARRIER TM005	1600	400	.6	150	95	62	45.7	208-1-60	1	23.3	118	1.2	-	41.4	50	10	700		1,2,3,4

1. E.S. P. DOES NOT INCLUDE LOSSES THROUGH ACCESSORIES.
2. RATED MINIMUM INPUT AT SEA LEVEL.
3. PROVIDE ONE 15 AMP, 120 VOLT, DUPLEX GFCI SERVICE OUTLET.
4. BELT DRIVE UNIT

SPLIT SYSTEM INDOOR UNIT SCHEDULE

SYMBOL	ROOMS SERVED	No. REQUIRED	CFM COOLING	MCA	MOCP	VOLTAGE-PHASE-HZ	FAN F.L.A.	MANUF. & MODEL #	SCHEDULE NOTES
FC 1	CLASS ROOM	1	600	1	15	120/60/1	.7	MITSUBISHI ELECTRIC PK18FK	
FC 2	TRAINING OFFICE	1	600	1	15	120/60/1	.7	MITSUBISHI ELECTRIC PK18FK	
FC 3	CORNER OFFICE	1	350	1	15	120/60/1	.7	MITSUBISHI ELECTRIC PK12FK	
FC 4	ADMIN OFFICE	1	350	1	15	120/60/1	.7	MITSUBISHI ELECTRIC PK12FK	
FC 5	1SG OFFICE	1	350	1	15	120/60/1	.7	MITSUBISHI ELECTRIC PK12FK	
FC 6	CDR OFFICE	1	350	1	15	120/60/1	.7	MITSUBISHI ELECTRIC PK12FK	
FC 7	INTERIOR OFFICE	1	350	1	15	120/60/1	.7	MITSUBISHI ELECTRIC PK12FK	
FC 8	MAINT OFFICE	1	350	1	15	120/60/1	.7	MITSUBISHI ELECTRIC PK12FK	
FC 9	WEST SUPPLY RM	1	600	1	15	120/60/1	.7	MITSUBISHI ELECTRIC PK18FK	
FC 10	NBC RM	1	350	1	15	120/60/1	.7	MITSUBISHI ELECTRIC PK12FK	
FC 11	PLT RM	1	350	1	15	120/60/1	.7	MITSUBISHI ELECTRIC PK12FK	
FC 12	TECH RM	1	350	1	15	120/60/1	.7	MITSUBISHI ELECTRIC PK12FK	
FC 13	EAST SUPPLY RM	1	600	1	15	120/60/1	.7	MITSUBISHI ELECTRIC PK18FK	

DIFFUSER SCHEDULE

SYMBOL	TYPE	MAX CFM	FACE SIZE	NCK SIZE	BLOW	PATTERN	AIR DIST. A%	AIR DIST. B%	SCHEDULE NOTES
D-1 / CFM	CEILING	400	12/12	10"Ø	4-WAY		25	25	1,2,3

1. PROVIDE LAY-IN CEILING AND BORDER / MODULE AS REQUIRED.
2. MAXIMUM NC 25 AT CFM LISTED.
3. PRICE MODEL SMD

AIR COOLED CONDENSING UNIT SCHEDULE

SYMBOL	AREA SERVED	MAX SIZE (BTU)	COMPRESSOR MOTOR			MCA	MOCP	MNUF. & MODEL #	SCHEDULE NOTES
			No.	RLA (EACH)	LRA (EACH)				
CU 1	CLASS ROOM	18,500	1	12	37	16	20	MITSUBISHI ELECTRIC PU18EK	1,2,3,4
CU 2	TRAINING OFFICE	18,500	1	12	37	16	20	MITSUBISHI ELECTRIC PU18EK	1,2,3,4
CU 3	CORNER OFFICE	12,500	1	8.9	29	11	15	MITSUBISHI ELECTRIC PU12EK	1,2,3,4
CU 4	ADMIN OFFICE	12,500	1	8.9	29	11	15	MITSUBISHI ELECTRIC PU12EK	1,2,3,4
CU 5	1SG OFFICE	12,500	1	8.9	29	11	15	MITSUBISHI ELECTRIC PU12EK	1,2,3,4
CU 6	CDR OFFICE	12,500	1	8.9	29	11	15	MITSUBISHI ELECTRIC PU12EK	1,2,3,4
CU 7	INTERIOR OFFICE	12,500	1	8.9	29	11	15	MITSUBISHI ELECTRIC PU12EK	1,2,3,4
CU 8	MAINT OFFICE	12,500	1	8.9	29	11	15	MITSUBISHI ELECTRIC PU12EK	1,2,3,4
CU 9	SUPPLY RM	18,500	1	12	37	16	20	MITSUBISHI ELECTRIC PU18EK	1,2,3,4
CU 10	NBC RM	12,500	1	8.9	29	11	15	MITSUBISHI ELECTRIC PU12EK	1,2,3,4
CU 11	PLT RM	12,500	1	8.9	29	11	15	MITSUBISHI ELECTRIC PU12EK	1,2,3,4
CU 12	TECH RM	12,500	1	8.9	29	11	15	MITSUBISHI ELECTRIC PU12EK	1,2,3,4
CU 13	SUPPLY RM 2	18,500	1	12	37	16	20	MITSUBISHI ELECTRIC PU18EK	1,2,3,4

1. REFRIGERANT R-22.
2. AT DESIGN CONDITIONS AND 95° F EAT.
3. CONDENSING UNIT SYMBOLS CORRESPOND WITH INDOOR UNIT SYMBOLS.
4. ELECTRIC SERVICE: 208/1Ø/60HZ

REGISTER, LOUVER & GRILLE SCHEDULE

SYMBOL	TYPE	SERVICE	MAX CFM	NOMINAL SIZE	THROAT SIZE	CEILING TYPE	COMMENTS	SCHEDULE NOTES
R-1	CEILING	RETURN	850	20/20	20/20	LAY-IN		1,2,3

REGISTER, LOUVER AND DIFFUSER SCHEDULE NOTE S:

1. MAXIMUM NC = 25 @ MAXIMUM CFM NOTED.
2. SHALL BE PRICE 535 OR EQUAL BY OTHER APPROVED MANUFACTURERS. (SEE SPECIFICATIONS).
3. SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.

State of Utah
Department of Administrative Services
Division of Facilities Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114
Phone: (801) 538 - 3018
Fax: (801) 538 - 3267
Internet: http://www.dfcm.state.ut.us

CONSULTANTS

WHW ENGINEERING INC.
PROFESSIONAL MECHANICAL ENGINEERING
1354 East 3300 South Suite 200
SALT LAKE CITY, UTAH 84106
(801)466-4021, FAX 466-8536
EMAIL: excellence@whw-engineering.com

PROJECT NAME & ADDRESS

LEHI NATIONAL GUARD COOLING ADDITION

DFCM No. 05122470

LEHI, Utah

MARK	DATE	REVISION

PROJECT MANAGER: WP
DRAWN BY: STAFF
CHECKED BY: SLW
DATE: 12/30/05
WHW JOB NO.: 05034

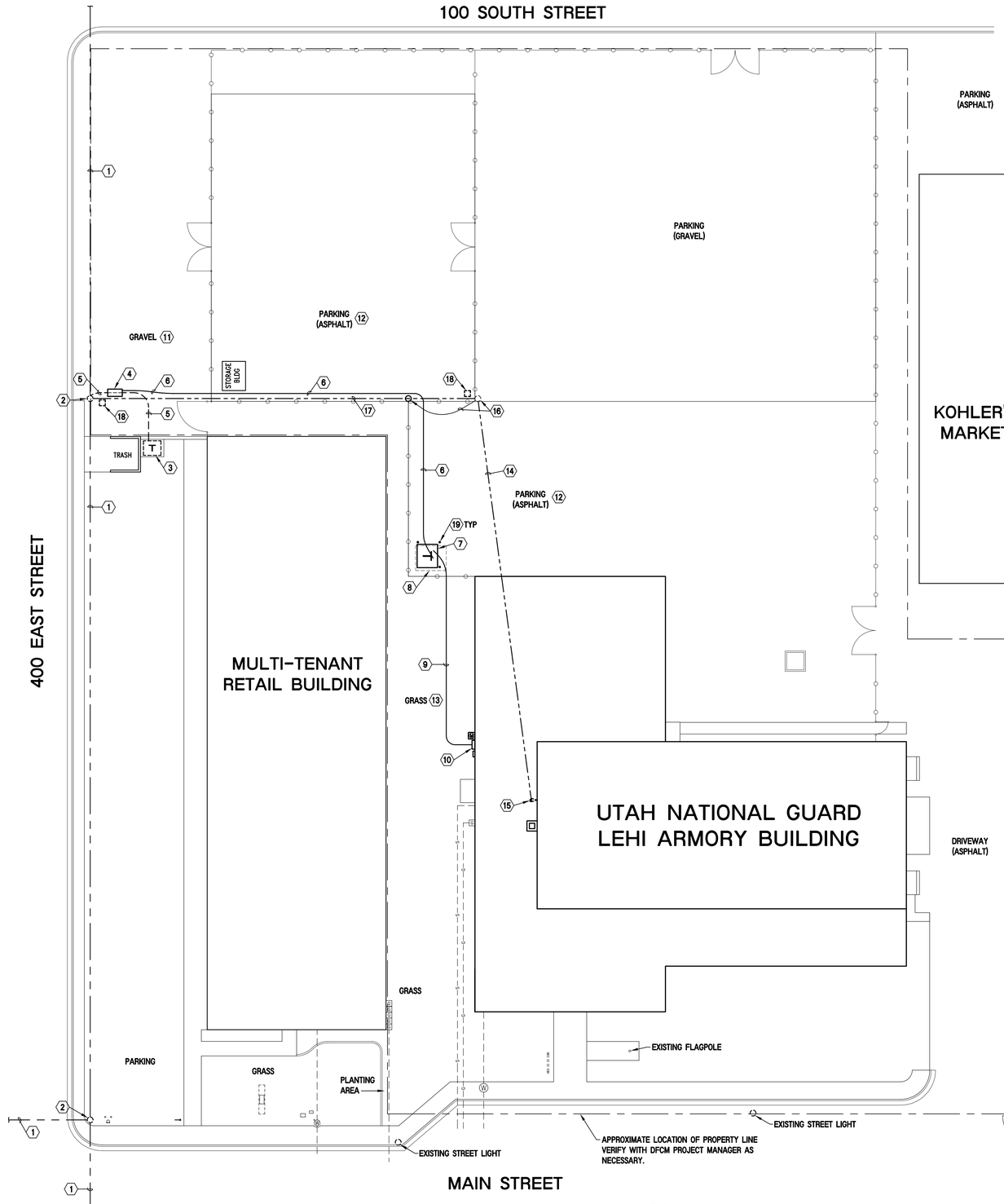
PROFESSIONAL ENGINEER 01/11/06 WINWARD M. PACKER No. 375080 STATE OF UTAH

SHEET TITLE

MECHANICAL SCHEDULES

SHEET NO.

ME601



ELECTRICAL SITE PLAN

SCALE: 1" = 20'-0"

0 10' 20' 40'

N

SITE PLAN GENERAL NOTES:

1. LOCATIONS OF EXISTING SITE UTILITIES, ETC., ARE BASED ON EXISTING BUILDING DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITIONS. FIELD VERIFY EXISTING UTILITY LOCATIONS AND IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
2. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING SITE AND UNDERGROUND UTILITIES. IMMEDIATELEY REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER. COORDINATE REPAIRS WITH THE GENERAL CONTRACTOR.
3. POWER OUTAGES TO THE EXISTING BUILDING WILL NOT BE ALLOWED EXCEPT ON WEEKENDS, HOLIDAYS, AND/OR AS DIRECTED BY THE OWNER. SUBMIT WRITTEN REQUESTS FOR POWER OUTAGES TO THE DFCM PROJECT MANAGER NOT LESS THAN 7 DAYS PRIOR TO ANY PROPOSED POWER OUTAGE. DO NOT TAKE POWER OUTAGE WITHOUT WRITTEN APPROVAL OF THE OWNER.
4. BURY UNDERGROUND PRIMARY SERVICE CONDUITS MINIMUM 36" BELOW FINISHED GRADE. BURY UNDERGROUND SECONDARY SERVICE CONDUITS MINIMUM 24" BELOW FINISHED GRADE.
5. PROVIDE RED MAGNETIC WARNING TAPE BURIED 6" BELOW FINISHED GRADE, STATING "CAUTION – BURIED ELECTRICAL" ABOVE ALL UNDERGROUND CONDUIT.
6. USE GALVANIZED RIGID STEEL CONDUIT (GRC) FOR ALL CONDUIT THROUGH GRADE AND ELBOWS IN PVC CONDUIT RUNS. CORROSION PROTECT GRC CONDUIT IN ACCORDANCE WITH SPECIFICATION SECTION 16110.
7. PROVIDE MINIMUM 30" RADIUS GRC ELBOWS FOR NEW PRIMARY ELECTRICAL SERVICE CONDUITS.
8. PROVIDE 1/4" NYLON PULL ROPE IN NEW PRIMARY ELECTRICAL SERVICE CONDUITS.
9. PROVIDE NEW ELECTRICAL SERVICE WORK AND ASSOCIATED SITE WORK IN ACCORDANCE WITH LEHI CITY DESIGN STANDARDS AND PUBLIC IMPROVEMENT SPECIFICATIONS AVAILABLE FROM LEHI CITY.
10. COORDINATE INSTALLATION OF NEW ELECTRICAL SERVICE AND METERING WITH LOCAL POWER COMPANY PRIOR TO BEGINNING WORK. CONTACT ROB LITTLEFIELD AT LEHI CITY POWER DEPARTMENT, (801) 768-4833.

REFERENCE NOTES:

FOR SHEET ES101 ONLY

1. EXISTING POWER COMPANY 3 PHASE OVERHEAD POWER LINE.
2. EXISTING POWER COMPANY POLE.
3. EXISTING 3 PHASE PAD MOUNT TRANSFORMER TO REMAIN.
4. NEW 3 PHASE LOADBREAK JUNCTION WITH PRE-CAST CONCRETE BASE FURNISHED BY POWER COMPANY, TO BE INSTALLED BY CONTRACTOR IN ACCORDANCE WITH POWER COMPANY REQUIREMENTS. FIELD COORDINATE EXACT LOCATION WITH POWER COMPANY AND OWNER.
5. INTERCEPT EXISTING 4" UNDERGROUND CONDUIT FROM POLE TO EXISTING TRANSFORMER AND REROUTE TO NEW LOAD BREAK JUNCTION. EXISTING PRIMARY POWER CABLES WILL BE REMOVED AND REPLACED BY POWER COMPANY.
6. NEW 4" PVC UNDERGROUND PRIMARY SERVICE CONDUIT, MINIMUM 36" BELOW GRADE, BY CONTRACTOR INCLUDING TRENCHING AND BACKFILL IN ACCORDANCE WITH POWER COMPANY REQUIREMENTS. PRIMARY SERVICE CABLES WILL BE PROVIDED BY POWER COMPANY.
7. NEW PAD MOUNT TRANSFORMER BY POWER COMPANY. NEW CONCRETE PAD BY CONTRACTOR IN ACCORDANCE WITH POWER COMPANY REQUIREMENTS. FIELD COORDINATE EXACT LOCATION WITH DFCM PROJECT MANAGER, POWER COMPANY, AND EXISTING UNDERGROUND UTILITIES.
8. EXISTING "TUFF-SHED" STORAGE BUILDING TO BE RELOCATED BY UTAH NATIONAL GUARD TO ALLOW INSTALLATION OF NEW TRANSFORMER.
9. NEW UNDERGROUND SECONDARY SERVICE CONDUIT AND CONDUCTORS, MINIMUM 24" BELOW GRADE, BY CONTRACTOR INCLUDING TRENCHING AND BACKFILL IN ACCORDANCE WITH POWER COMPANY REQUIREMENTS. SEE POWER RISER DIAGRAM, SHEET E-601, FOR SIZE.
10. NEW METERING CABINET, METER BASE, AND MAIN BREAKER. SEE POWER RISER DIAGRAM, SHEET E-601, FOR REQUIREMENTS.
11. REPAIR EXISTING GRAVEL COVER TO MATCH ORIGINAL CONDITIONS UPON COMPLETION OF BACKFILLING FOR NEW UNDERGROUND CONDUIT.
12. SAWCUT AND REMOVE EXISTING ASPHALT PAVING TO INSTALL NEW UNDERGROUND CONDUIT. REPLACE ASPHALT PAVING AND SUBGRADE MATERIALS TO MATCH ORIGINAL CONDITION UPON COMPLETION OF BACKFILLING.
13. REPAIR EXISTING LANDSCAPE AREAS TO MATCH ORIGINAL CONDITIONS UPON COMPLETION OF BACKFILLING, INCLUDING INSTALLATION OF NEW GRASS SOD, NEW PLANTS, ETC..
14. EXISTING OVERHEAD 3 PHASE SECONDARY SERVICE CABLE TO BE REMOVED BY POWER COMPANY.
15. REMOVE EXISTING ELECTRICAL SERVICE MAST INCLUDING CONDUIT THROUGH ROOF. PROVIDE TEMPORARY ROOF REPAIR AS REQUIRED TO MAINTAIN A WEATHERTIGHT CONDITION FOR THE BUILDING. PERMANENT ROOF REPAIR WILL BE MADE UNDER A SEPARATE ROOFING IMPROVEMENT CONTRACT.
16. EXISTING POWER COMPANY POLE WITH LEASE LIGHT TO BE RELOCATED BY POWER COMPANY. CONTRACTOR TO REPLACE EXISTING ASPHALT PAVING AND SUBBASE MATERIALS AS REQUIRED TO MATCH ORIGINAL CONDITION.
17. EXISTING OVERHEAD 3 PHASE SECONDARY SERVICE CABLE TO BE REPLACED WITH NEW SINGLE PHASE OVERHEAD CABLE TO RELOCATED LEASE LIGHT BY POWER COMPANY.
18. EXISTING TELEPHONE PEDASTAL TERMINAL TO REMAIN.
19. PROVIDE CONCRETE FILLED BARRIER POSTS IN ACCORDANCE WITH POWER COMPANY REQUIREMENTS TO PROTECT TRANSFORMER FROM VEHICULAR TRAFFIC AS APPROVED BY POWER COMPANY.

State of Utah
Department of Administrative Services
Division of Facilities Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114
Phone: (801) 538 - 3018
Fax: (801) 538 - 3267
Internet: http://www.dfcm.state.ut.us

CONSULTANTS

WHW ENGINEERING INC.
PROFESSIONAL MECHANICAL ENGINEERING
1354 East 3300 South Suite 200
SALT LAKE CITY, UTAH 84106
(801)466-4021, FAX 466-8536
EMAIL: excellence@whwengineering.com

ELECTRICAL
Thomas and Kolkman Engineering Co. Inc.
64 West 1700 South
Salt Lake City, Utah 84115
Ph#: (801) 484-8161 Fax: (801) 484-3538

PROJECT NAME & ADDRESS

LEHI NATIONAL GUARD COOLING ADDITION

DFCM No. 05122470

300 EAST MAIN STREET
LEHI, UTAH 84043

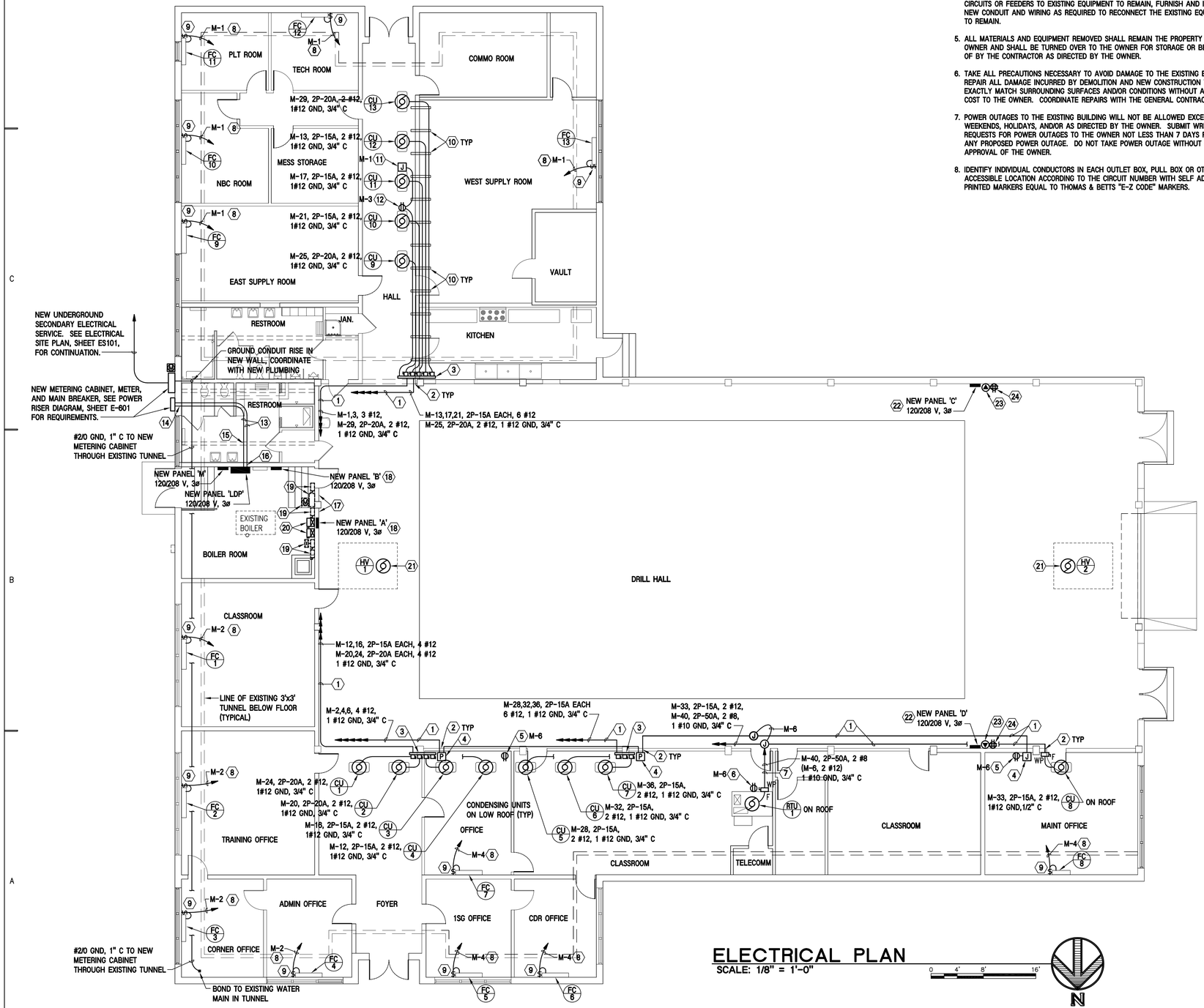
MARK	DATE	REVISION

PROJECT MANAGER: SLW
DRAWN BY: W.B.G.
CHECKED BY: R.G.K.
DATE: 1/10/06
WHW JOB NO.: 05034

REGISTERED PROFESSIONAL ENGINEER
RAYMOND G. KOLKMAN
175780
1/10/06
STATE OF UTAH

SHEET TITLE
ELECTRICAL SITE PLAN

SHEET NO.
ES101



ELECTRICAL PLAN

SCALE: 1/8" = 1'-0"

0 4' 8' 16'

N

GENERAL ELECTRICAL NOTES:

1. COORDINATE MECHANICAL EQUIPMENT LOCATIONS WITH MECHANICAL PLANS AND MECHANICAL CONTRACTOR.
2. LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, LIGHTING, SWITCHES, OUTLETS, BRANCH CIRCUIT WIRING, ETC., ARE BASED ON EXISTING BUILDING ELECTRICAL DRAWINGS AND FIELD OBSERVATION OF EXISTING SURFACE CONDITINS. FIELD VERIFY EXISTING LOCATIONS AND CIRCUITING AND IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES WHICH MAY ADVERSELY AFFECT COMPLETION OF THE WORK.
3. DEMOLITION IS SHOWN FOR CONTRACTORS REFERENCE ONLY. FIELD VERIFY QUANTITIES AND LOCATIONS OF ALL EXISTING MATERIAL AND EQUIPMENT TO BE REMOVED. REMOVE ALL ABANDONED CONDUIT WIRING, BOXES, EQUIPMENT, ETC., WHETHER SPECIFICALLY SHOWN OR NOT.
4. WHERE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT INTERRUPTS EXISTING BRANCH CIRCUITS OR FEEDERS TO EXISTING EQUIPMENT TO REMAIN, FURNISH AND INSTALL NEW CONDUIT AND WIRING AS REQUIRED TO RECONNECT THE EXISTING EQUIPMENT TO REMAIN.
5. ALL MATERIALS AND EQUIPMENT REMOVED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE TURNED OVER TO THE OWNER FOR STORAGE OR BE DISPOSED OF BY THE CONTRACTOR AS DIRECTED BY THE OWNER.
6. TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO THE EXISTING BUILDING. REPAIR ALL DAMAGE INCURRED BY DEMOLITION AND NEW CONSTRUCTION TO EXACTLY MATCH SURROUNDING SURFACES AND/OR CONDITIONS WITHOUT ADDITIONAL COST TO THE OWNER. COORDINATE REPAIRS WITH THE GENERAL CONTRACTOR.
7. POWER OUTAGES TO THE EXISTING BUILDING WILL NOT BE ALLOWED EXCEPT ON WEEKENDS, HOLIDAYS, AND/OR AS DIRECTED BY THE OWNER. SUBMIT WRITTEN REQUESTS FOR POWER OUTAGES TO THE OWNER NOT LESS THAN 7 DAYS PRIOR TO ANY PROPOSED POWER OUTAGE. DO NOT TAKE POWER OUTAGE WITHOUT WRITTEN APPROVAL OF THE OWNER.
8. IDENTIFY INDIVIDUAL CONDUCTORS IN EACH OUTLET BOX, PULL BOX OR OTHER ACCESSIBLE LOCATION ACCORDING TO THE CIRCUIT NUMBER WITH SELF ADHESIVE PRINTED MARKERS EQUAL TO THOMAS & BETTS "E-Z CODE" MARKERS.

REFERENCE NOTES:

FOR SHEET E-101 ONLY

1. INSTALL CONDUIT ON INTERIOR OF DRILL HALL, BELOW CLERESTORY WINDOWS, AT 12 FT ± ABOVE FLOOR. PAINT CONDUIT AND BOXES TO MATCH WALL.
2. DRILL EXTERIOR MASONRY WALL FOR NEW CONDUIT PENETRATION FROM DRILL HALL TO EQUIPMENT LOCATED ABOVE LOW ROOF. SEAL CONDUIT PENETRATION WEATHERTIGHT WITH NON-SHRINK GROUT COLORED TO MATCH BRICK.
3. NEW 4" x 4" NEMA 3R SCREW COVER WIREWAY, LENGTH AS REQUIRED, AND FUSED SAFETY SWITCHES ON EXTERIOR WALL ABOVE LOW ROOF FOR NEW CONDENSING UNITS INSTALL WITH BOTTOM OF SAFETY SWITCHES MINIMUM 24" ABOVE LOW ROOF.
4. NEW 4" x 4" x 4" (MINIMUM) NEMA 3R SCREW COVER JUNCTION BOX ON EXTERIOR WALL MINIMUM 24" ABOVE LOW ROOF. EXTEND CIRCUITS TO NEW EQUIPMENT AND RECEPTACLES AS INDICATED.
5. NEW GFCI DUPLEX RECEPTACLE WITH "RAINTIGHT WHILE IN USE" COVERPLATE MOUNTED MINIMUM 24" ABOVE LOW ROOF. CONNECT TO CIRCUIT INDICATED.
6. GFCI DUPLEX RECEPTACLE FURNISHED WITH ROOFTOP UNIT RTU/1. CONNECT TO NEW CIRCUIT INDICATED.
7. INSTALL CONDUIT TO ROOFTOP UNIT RTU/1 FROM JUNCTION BOX IN DRILL HALL, THROUGH ACCESSIBLE CEILING SPACE IN CLASSROOM AND THROUGH NEW ROOF CURB TO FUSED SAFETY SWITCH ON ROOF.
8. INSTALL 3/4" POWER CONDUIT FROM INDOOR FAN COIL UNIT THROUGH ROOF TO FOLLOW ROUTE OF REGRIGERANT PIPING ON ROOF TO CONDENSING UNIT. EXTEND CONDUIT ON ROOF TO NEW NEMA 3R JUNCTION BOX AND CONNECT TO CIRCUIT INDICATED. COORDINATE WITH ORIGINAL ROOFING CONTRACTOR FOR NEW CONDUIT PENETRATION THROUGH ROOF TO MAINTAIN ROOF WARRANTY.
9. PROVIDE SINGLE POLE TOGGLE SWITCH ADJACENT TO NEW INDOOR FAN COIL UNIT. COORDINATE LOCATION WITH MECHANICAL CONTRACTOR TO ALLOW REMOVAL OF INDOOR UNIT ACCESS COVERS.
10. PROVIDE CONDUIT SUPPORTS ON ROOF, SEE DETAIL 15/E-602.
11. NEW 4" x 4" x 4" (MINIMUM) NEMA 3R SCREW COVER JUNCTION BOX. MOUNT ON END OR REAR OF NEW CONDENSING UNIT AS REQUIRED TO AVOID INTERFERENCE WITH CONDENSING UNIT ACCESS PANELS. EXTEND CIRCUITS TO NEW EQUIPMENT AND RECEPTACLES AS INDICATED.
12. NEW GFCI DUPLEX RECEPTACLE WITH "RAINTIGHT WHILE IN USE" COVERPLATE. MOUNT ON END OR REAR OF NEW CONDENSING UNIT AS REQUIRED TO AVOID INTERFERENCE WITH CONDENSING UNIT ACCESS PANELS. CONNECT TO CIRCUIT INDICATED.
13. INSTALL NEW FEEDER FROM NEW MAIN BREAKER TO NEW PANEL 'LDP' ABOVE RESTROOM CEILING. EXISTING RESTROOM CEILINGS ARE TO BE REMOVED AND REPLACED UNDER A SEPARATE RESTROOM REMODEL PROJECT. COORDINATE CONDUIT INSTALLATION WITH RESTROOM REMODEL CONTRACTOR AND DFCM PROJECT MANAGER.
14. CORE-DRILL EXISTING EXTERIOR WALL FOR NEW CONDUIT PENETRATION AND SEAL WATERTIGHT WITH NON-SHRINK EPOXY GROUT COLORED TO MATCH EXTERIOR BRICK. CORE-DRILL WILL BE THROUGH EXTERIOR BRICK AND EXISTING 8" x 2'-4" CONCRETE BEAM AT TOP OF MASONRY WALL. LOCATE HOLES NEAR MIDDLE OF THE CONCRETE BEAM TO MISS 2 #7 REINFORCING BARS AT TOP AND BOTTOM OF BEAM.
15. APPROXIMATE LOCATION OF 8" x 16" GLU-LAM BEAM ABOVE RESTROOM CEILING. HOLE-SAW EXISTING BEAM FOR NEW CONDUIT PENETRATIONS. LOCATE HOLES AS CLOSE AS POSSIBLE TO MIDDLE OF BEAM SPAN AND MIDDLE BEAM HEIGHT. USE MINIMUM HOLE-SAW SIZE REQUIRED FOR NEW CONDUITS.
16. CORE-DRILL AND FIRE SEAL EXISTING 8" x 2'-4" CONCRETE BEAM FOR NEW CONDUIT PENETRATATIONS. LOCATE HOLES NEAR MIDDLE OF THE CONCRETE BEAM TO MISS 2 #7 REINFORCING BARS AT TOP AND BOTTOM OF BEAM.
17. CORE-DRILL AND FIRE SEAL EXISTING CONCRETE BLOCK WALL FOR NEW CONDUIT PENETRATIONS FROM DRILL HALL INTO BOILER ROOM. MAKE CONDUIT PENETRATIONS THROUGH CONCRETE BLOCK BELOW EXISTING REINFORCED CONCRETE BOND BEAM AND BELOW EXISTING MECHANICAL ROOM CEILING, NEAR ELEVATION OF EXISTING PIPING AND CONDUIT PENETRATIONS.
18. REPLACE EXISTING 120/240 V, 1ø PANEL WITH NEW 120/208 V, 3ø PANEL AND RECONNECT ALL EXISTING CIRCUITS. SEE POWER RISER DIAGRAM, SHEET E-601, FOR REQUIREMENTS.
19. REMOVE EXISTING SERVICE MAST, METERING CABINET, METER, WIREWAY, SAFETY SWITCHES, ETC.. SEE POWER RISER DIAGRAM, SHEET E-601, FOR REQUIREMENTS.
20. REPLACE EXISTING SAFETY SWITCHES AND STARTERS FOR DRILL HALL HEATING & VENTILATION UNITS WITH NEW COMBINATION MAGNETIC STARTERS. CONNECT TO NEW PANEL 'LDP' AS SHOWN ON POWER RISER DIAGRAM, SHEET E-601.
21. EXISTING DRILL HALL HEATING & VENTILATION UNITS TO REMAIN. REPLACE EXISTING FAN MOTOR WITH NEW FAN MOTOR SUITABLE FOR OPERATION AT 208 VOLT, 3ø. SEE POWER RISER DIAGRAM, SHEET E-601.
22. FIELD COORDINATE EXACT LOCATION OF NEW PANELBOARDS WITH PROJECT ENGINEER AND OWNER. INSTALL NEW PANEL FEEDER TO FOLLOW ROUTE OF NEW BRANCH CIRCUIT CONDUITS AS DESCRIBED IN REFERENCE NOTE #1.
23. PROVIDE FOUR (4) 50 AMP, 120 VOLT, 2P, 3W, TWIST-LOCK RECEPTACLES, EQUAL TO HUBBELL #CS6370, WITH HUBBELL #HBL7770 CAST ALUMUMINUM PROTECTIVE COVER PLATE BELOW EACH NEW PANEL 'C' AND NEW PANEL 'D'. CONNECT EACH RECEPTACLE TO A 1P-50A BREAKER IN THE NEW PANEL WITH 3 #8 WIRES IN 3/4" CONDUIT. SEE PANEL SCHEDULES FOR CIRCUIT INFORMATION. PROVIDE MATING TWIST-LOCK PLUG EQUAL TO HUBBELL #CS8361C FOR EACH RECEPTACLE.
24. PROVIDE DOUBLE DUPLEX RECEPTACLE IN SURFACE OUTLET BOX WITH RAISED INDUSTRIAL COVER BELOW EACH NEW PANEL 'C' AND NEW PANEL 'D'. CONNECT EACH RECEPTACLE TO A SEPARATE CIRCUIT. SEE PANEL SCHEDULES FOR CIRCUIT INFORMATION.

State of Utah
Department of Administrative Services
Division of Facilities Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114
Phone: (801) 538 - 3018
Fax: (801) 538 - 3267
Internet: http://www.dfcm.state.ut.us

CONSULTANTS

WHW ENGINEERING INC.
PROFESSIONAL MECHANICAL ENGINEERING
1354 East 3300 South Suite 200
SALT LAKE CITY, UTAH 84106
(801)466-4021, FAX 466-8536
EMAIL: excellence@whwengineering.com

ELECTRICAL
Thomas and Kolkman Engineering Co. Inc.
64 West 1700 South
Salt Lake City, Utah 84115
Ph#: (801) 484-8161 Fax: (801) 484-3538

PROJECT NAME & ADDRESS

LEHI NATIONAL GUARD COOLING ADDITION

DFCM No. 05122470

300 EAST MAIN STREET
LEHI, UTAH 84043

MARK	DATE	REVISION

PROJECT MANAGER: SLW
DRAWN BY: W.B.G.
CHECKED BY: R.G.K.
DATE: 1/10/06
WHW JOB NO.: 05034

REGISTERED PROFESSIONAL ENGINEER RAYMOND G. KOLKMAN 175780 STATE OF UTAH

SHEET TITLE
ELECTRICAL PLAN

SHEET NO.
E-101

NEW PANEL 'A' +
TYPE 'NQOD', BOLT ON
3 POLE 225 AMP MAIN LUGS

22,000 A.I.C., SERIES OR FULLY RATED
120/208 VOLT, 3 PHASE, 4 WIRE
FLUSH MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	1	20	LTS, DRILL HALL SOUTH	4		860	1,720			860		4	LTS, DRILL HALL SD CNTR	1	20	2
3			LTS, DRILL HALL SOUTH	4		860		1,720		860		4	LTS, DRILL HALL SD CNTR			4
5			LTS, DRILL HALL NO CNTR	4		860			1,720	860		4	LTS, DRILL HALL NORTH			6
7			LTS, DRILL HALL NO CNTR	4		860	1,720			860		4	LTS, DRILL HALL NORTH			8
9			LTS, 1ST PLATOON CLSSRM			1,200		2,400		1,200			LTS, FRONT NO WEST ROOM			10
11			120TH WALL PLUGS, OUTSIDE			1,200			2,400	1,200			LTS, FRONT NO EAST ROOM			12
13			LTS, EAST ROOM			1,200	2,400			1,200			LTS, BOILER ROOM			14
15			LTS, EAST ROOM			1,200		2,895		1,695			LTS & EF, TOILET ROOMS			16
17			LTS, SOUTHEAST ROOM			1,200			2,400	1,200			LTS, MESS ROOM			18
19			LTS SOUTHWEST ROOM			1,200	2,400			1,200			LTS, HALLWAY			20
21			REC, DRILL HALL NORTH			1,200		2,400		1,200			REC, DRILL HALL SOUTH			22
23			REC, EAST ROOM			1,200			2,400	1,200			REC, NORTHEAST ROOM			24
25			REC, NORTHWEST ROOM			1,200	2,400			1,200			REC, SOUTHEAST ROOM			26
27			REC, SOUTHWEST ROOM			1,200		2,400		1,200			REC, RCAS			28
29			REC, SUPPLY OFFICE			1,200			2,400	1,200			REC, RCAS, DEDICATED			30
31			REC, SUPPLY OFFICE			1,200	2,400			1,200			LTS, EXTERIOR FLOODS			32
33			SPARE					1,200		1,200			REC, LOCKER RM & MAINT.			34
35	1	20	BOILER RM MOTOR			1,200			1,870	670			CIRC. PUMP EAST H&V UNIT			36
37	2	40	PANEL IN KITCHEN			2,400	3,070			670			CIRC. PUMP WEST H&V UNIT			38
39	-	-	-			2,400		2,400					SPARE			40
41	1	20	REC, CONFERENCE ROOM			1,200			2,400	1,200			ATC AIR COMPRESSOR	1	20	42
							16,110	15,415	15,590							

TOTAL CONNECTED LOAD: 47,115 VA 131 AMPS
CALCULATED FEEDER DEMAND, NEC 220: 50,659 VA 141 AMPS FEEDER: 4 #3/0, 1 #4 GND, 3" C

+ NEW 3 PHASE PANEL 'A' TO REPLACE EXISTING 1 PHASE PANEL 'A'.
ALL CIRCUITS INDICATED ARE EXISTING TO REMAIN, RECONNECT TO NEW PANEL. LOAD IS ESTIMATED.
FIELD VERIFY LOAD SERVED BY EACH CIRCUIT AND INDICATE ON NEW TYPWRITTEN CIRCUIT INDEX.

NEW PANEL 'B' +
TYPE 'NQOD', BOLT ON
3 POLE 225 AMP MAIN LUGS

22,000 A.I.C., SERIES OR FULLY RATED
120/208 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	1	20	COMM ✖			1,200	1,400			200			SHUNT TRIP CONTROL ✖	1	20	2
3			COMM ✖			1,200		2,400		1,200			REC, GFCI ✖	1	20	4
5	2	30	WEST HOT WATER PUMP ✖			1,450			2,650	1,200			BOILER ✖	1	20	6
7	-	-	-			1,450	1,450						(SHUNT TRIP MODULE)	-	-	8
9	2	30	EAST HOT WATER PUMP ✖			1,450		1,450					SPARE	1	20	10
11	-	-	-			1,450			1,450				SPARE TO CEILING COMM ✖			12
13	1	20	REC, WOMEN'S TOILET RM #	2		360	1,560			1,200			REC, EAST COMM ✖			14
15	1	20	REC, WATER COOLER #	1		180		540		360	2		REC, MEN'S TOILET RM #			16
17	1	20	REC, OFFICE NORTH WALL #	5		900			1,080	180	1		REC, JANITOR #			18
19	1	15	DOMESTIC HW CIRC PUMP #			60	1,260			1,200			EXIT LIGHTS			20
21	1	25	EXIST CIRCUIT - VERIFY			1,800		1,800					SPARE			22
23	1	20	SPARE						0				SPARE			24
25	1	20	SPARE				0						SPARE			26
27	1	20	SPARE					0					SPARE			28
29	1	20	SPARE						0				SPARE	1	20	30
31	1		SPACE				0						SPACE	1		32
33								0								34
35									0							36
37							0									38
39								0								40
41	1		SPACE						0				SPACE	1		42
							5,670	6,190	5,180							

TOTAL CONNECTED LOAD: 17,040 VA 47 AMPS
CALCULATED FEEDER DEMAND, NEC 220: 18,515 VA 51 AMPS FEEDER: 4 #3/0, 1 #4 GND, 2" C

+ NEW 3 PHASE PANEL 'B' TO REPLACE EXISTING 1 PHASE PANEL 'B'.
✖ EXISTING CIRCUIT TO REMAIN, RECONNECT TO NEW PANEL. LOAD IS ESTIMATED. FIELD VERIFY LOAD AND INDICATE ON NEW CIRCUIT INDEX.
NEW CIRCUIT TO BE PROVIDED UNDER SEPARATE RESTROOMS REMODEL PROJECT.

NEW PANEL 'LDP'
TYPE 'I-LINE'
3 POLE 800 AMP MAIN LUGS

22,000 A.I.C., FULLY RATED
120/208 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	3	15	D HALL, EAST H&V UNIT			940	1,880			940			D HALL, WEST H&V UNIT	3	15	2
	-	-	-			940		1,880		940			-	-	-	
	-	-	-			940			1,880	940			-	-	-	
3	3	100	SPACE				0						SPACE	3	100	4
	-	-	-					0					-	-	-	
	-	-	-						0				-	-	-	
5	3	100	SPACE				0						SPACE	3	100	6
	-	-	-					0					-	-	-	
	-	-	-						0				-	-	-	
7	3	225	PANEL 'D'			7,500	15,000			7,500			PANEL 'C'	3	100	8
	-	-	-			4,950		9,900		4,950			-	-	-	
	-	-	-			4,950			9,900	4,950			-	-	-	
9	3	200	PANEL 'M'			12,605	18,275			5,670			PANEL 'B'	3	200	10
	-	-	-			14,900		21,090		6,190			-	-	-	
	-	-	-			15,885			21,065	5,180			-	-	-	
11	3	225	SPACE				16,110			16,110			PANEL 'A'	3	200	12
	-	-	-					15,415		15,415			-	-	-	
	-	-	-						15,590	15,590			-	-	-	
13	3	225	SPACE				0						SPACE	3	225	14
	-	-	-					0					-	-	-	
	-	-	-						0				-	-	-	
							51,265	48,285	48,435							

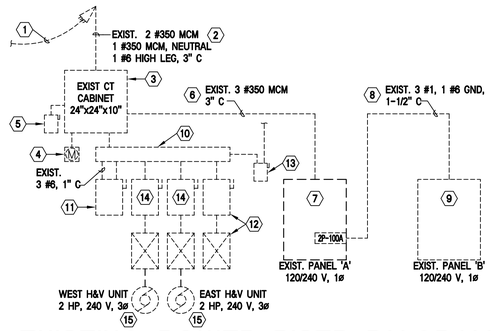
TOTAL CONNECTED LOAD: 147,985 VA 411 AMPS FEEDER: 8 #500 KCM, 2 #2/0 GND, (2) 3-1/2" C
CALCULATED FEEDER DEMAND, NEC 220: 147,874 VA 410 AMPS

POWER RISER REFERENCE NOTES:

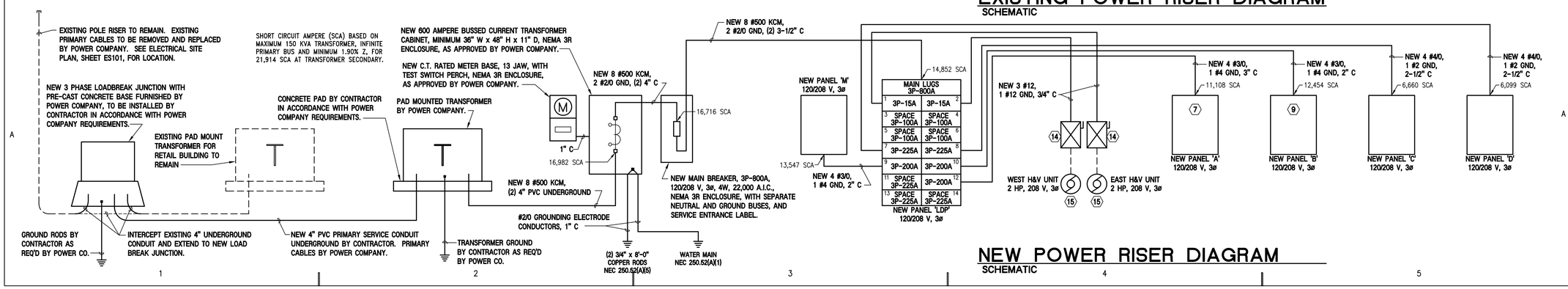
1. EXISTING OVERHEAD SERVICE CABLE TO BE REMOVED BY POWER COMPANY.
2. REMOVE EXISTING ELECTRICAL SERVICE MAST AND CONDUCTORS. PROVIDE TEMPORARY ROOF REPAIR TO MAINTAIN BUILDING IN WEATHERTIGHT CONDITION. PERMANENT ROOF REPAIR WILL BE MADE UNDER SEPARATE ROOFING IMPROVEMENTS CONTRACT. COORDINATE REQUIREMENTS WITH DFCM PROJECT MANAGER.
3. REMOVE EXISTING METERING CABINET, COORDINATE WITH POWER CO.
4. REMOVE EXISTING METER, COORDINATE WITH POWER CO.
5. REMOVE EXISTING FUSED SAFETY SWITCH FOR EXIT LIGHTS. RECONNECT EXISTING EXIT LIGHT CIRCUIT TO NEW PANEL 'B-20'.
6. REMOVE EXISTING PANEL 'A' FEEDER.
7. REPLACE EXISTING 1 PHASE PANEL 'A' WITH NEW 3 PHASE PANEL 'A'. PROVIDE NEW FEEDER TO NEW PANEL 'LDP' AND RECONNECT ALL EXISTING BRANCH CIRCUITS. SAWCUT EXISTING BLOCK WALL AS REQUIRED TO INSTALL NEW PANEL ENCLOSURE. EXISTING ENCLOSURE, APPROXIMATELY 46" H x 20" W, MAY BE USED IF NEC REQUIRED WIRE BENDING SPACE IS PROVIDED.
8. REMOVE EXISTING PANEL 'B' FEEDER.

POWER RISER REFERENCE NOTES:

9. REPLACE EXISTING 1 PHASE PANEL 'B' WITH NEW 3 PHASE PANEL 'B'. PROVIDE NEW FEEDER TO NEW PANEL 'LDP' AND RECONNECT ALL EXISTING BRANCH CIRCUITS.
10. REMOVE EXISTING 4"x4" WIREWAY.
11. REMOVE EXISTING 3P-60A, 240 V, 3ø, FUSED SAFETY SWITCH..
12. REMOVE ABANDONED 2P-30A FUSED SAFETY SWITCH AND SINGLE PHASE STARTER.
13. REMOVE EXISTING 30 AMP SAFETY SWITCH WITH (1) 25 AMP FUSE. RECONNECT EXISTING CIRCUIT TO NEW PANEL 'B-21'. FIELD VERIFY LOAD SERVED AND INDICATE ON NEW TYPEWRITTEN CIRCUIT INDEX.
14. REPLACE EXISTING 3P-30A FUSED SAFETY SWITCHES AND STARTERS FOR EXISTING DRILL HALL HEATING & VENTILATION UNITS WITH NEW SIZE 1 COMBINATION STARTER WITH 3P-15A MCP. PROVIDE NEW CIRCUITS TO NEW PANEL 'LDP'. EXTEND AND RECONNECT EXISTING AUTOMATIC TEMPERATURE CONTROL SYSTEM WIRING AS REQUIRED.
15. REPLACE EXISTING DRILL HALL HEATING & VENTALATION UNIT FAN MOTOR WITH NEW MOTOR RATED FOR USE ON 208 VOLT SYSTEM. FIELD VERIFY MOTOR HORSEPOWER AND FRAME TYPE PRIOR TO ORDERING NEW MOTOR.



EXISTING POWER RISER DIAGRAM
SCHEMATIC



NEW POWER RISER DIAGRAM
SCHEMATIC

POWER RISER GENERAL NOTES:

1. SEE GENERAL ELECTRICAL NOTES, SHEET E-101, AND SITE PLAN GENERAL NOTES, SHEET ES101.
2. REMOVE ALL ABANDONED CONDUIT, WIRING, BOXES, ETC., ASSOCIATED WITH EQUIPMENT TO BE REMOVED.

SYMBOL LIST

SYMBOL	DESCRIPTION
J	NEW JUNCTION BOX
NEMA 3R	NEW NEMA 3R SCREW COVER JUNCTION BOX
J	EXISTING JUNCTION BOX
	NEW DUPLEX RECEPTACLE
	NEW DOUBLE DUPLEX RECEPTACLE
	NEW SPECIAL PURPOSE RECEPTACLE
	EXISTING DUPLEX RECEPTACLE
GFI	RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER
$	NEW SINGLE POLE SWITCH
	NEW POWER PANELBOARD, 120/208 VOLT, 3 PHASE
A-1,3,5 2	NEW 3 PHASE, 4 WIRE HOMERUN INDICATING PANEL AND CIRCUIT NUMBERS
	NEW BRANCH CIRCUIT
	EXISTING BRANCH CIRCUIT
	EXISTING OVERHEAD POWER LINE
M	NEW METER
M	EXISTING METER
T	NEW TRANSFORMER
T	EXISTING TRANSFORMER
	NEW MOTOR
F	NEW SAFETY SWITCH, 'F' INDICATES FUSED
	NEW COMBINATION MAGNETIC MOTOR STARTER WITH MCP DISCONNECT
	EXISTING MOTOR
	EXISTING MAGNETIC MOTOR STARTER
	EXISTING SAFETY SWITCH
EQ 2	EQUIPMENT SCHEDULE SYMBOL
1	REFERENCE NOTE SYMBOL
WP	INDICATES ITEM IN WEATHERPROOF (NEMA 3R MINIMUM) ENCLOSURE

State of Utah
Department of Administrative Services
Division of Facilities Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114
Phone: (801) 538 - 3018
Fax: (801) 538 - 3267
Internet: http://www.dfcm.state.ut.us

CONSULTANTS

WHW ENGINEERING INC.
PROFESSIONAL MECHANICAL ENGINEERING
1354 East 3300 South Suite 200
SALT LAKE CITY, UTAH 84106
(801)466-4021, FAX 466-8536
EMAIL: excellence@whwengineering.com

ELECTRICAL
Thomas and Kolkman Engineering Co. Inc.
64 West 1700 South
Salt Lake City, Utah 84115
Ph#: (801) 484-8161 Fax: (801) 484-3538

PROJECT NAME & ADDRESS

LEHI NATIONAL GUARD COOLING ADDITION

DFCM No. 05122470

300 EAST MAIN STREET
LEHI, UTAH 84043

MARK	DATE	REVISION

PROJECT MANAGER: SLW
DRAWN BY: W.B.G.
CHECKED BY: R.G.K.
DATE: 1/10/06
WHW JOB NO.: 05034

REGISTERED PROFESSIONAL ENGINEER
RAYMOND G. KOLKMAN
175780
STATE OF UTAH

SHEET TITLE
POWER RISER DIAGRAMS AND SCHEDULES

SHEET NO.
E-601

NEW PANEL 'M'
TYPE 'NQOD', BOLT-ON
3 POLE 225 AMP MAIN LUGS

22,000 A.I.C., SERIES OR FULLY RATED
120/208 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	1	15	INDOOR FC UNITS SOUTH			420	760			340			INDOOR FC UNITS NORTHEAST	1	15	2
3	1	20	REC, DN ROOF SOUTH BLDG		1	180		700		340			INDOOR FC UNITS NORTHWEST	1	15	4
5	1	20	SPARE						540	540	3		REC, DN ROOF NORTH BLDG	1	20	6
7	1	20	SPARE				0						SPARE	1	20	8
9	1	20	SPARE					0					SPARE	1	20	10
11	1	20	SPARE						1,145	1,145			CU/4 - ADMIN OFFICE	2	15	12
13	2	15	CU/12 - TECH ROOM			1,145	2,290			1,145			-	-	-	14
15	-	-	-			1,145		2,290		1,145			CU/3 - CORNER OFFICE	2	15	16
17	2	15	CU/11 - PLT ROOM			1,145			2,290	1,145			-	-	-	18
19	-	-	-			1,145	2,675			1,530			CU/2 - TRAINING OFFICE	2	20	20
21	2	15	CU/10 - NBC ROOM			1,145		2,675		1,530			-	-	-	22
23	-	-	-			1,145			2,675	1,530			CU/1 - CLASSROOM	2	20	24
25	2	20	CU/9 - WEST SUPPLY ROOM			1,530	3,060			1,530			-	-	-	26
27	-	-				1,530		2,675		1,145			CU/5 - 1SG OFFICE	2	15	28
29	2	20	CU/13 - EAST SUPPLY ROOM			1,530			2,675	1,145			-	-	-	30
31	-	-	-			1,530	2,675			1,145			CU/6 - CDR OFFICE	2	15	32
33	2	15	CU/8 - MAINT OFFICE			1,145		2,290		1,145			-	-	-	34
35	-	-	-			1,145			2,290	1,145			CU/7 - OFFICE	2	15	36
37	1		SPACE				1,145			1,145			-	-	-	38
39	1		SPACE					4,270		4,270			RTU/1 - CLASSROOMS	2	50	40
41	1		SPACE						4,270	4,270			-	-	-	42
							12,605	14,900	15,885							

TOTAL CONNECTED LOAD: 43,390 VA 120 AMPS
CALCULATED FEEDER DEMAND, NEC 220: 45,525 VA 126 AMPS FEEDER: 4 #3/0, 1 #4 GND, 2" C

NEW PANEL 'C'
TYPE 'NQOD', BOLT ON
3 POLE 225 AMP MAIN LUGS

10,000 A.I.C., FULLY RATED
120/208 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	1	20	SPARE				0						SPARE	1	20	2
3	|	|	REC BELOW PANEL		1	1,200		1,200					SPARE	|	|	4
5	|	|	REC BELOW PANEL		1	1,200			1,200				SPARE	|	|	6
7	|	|	SPARE				0						SPARE	|	|	8
9	|	|	SPARE					0					SPARE	|	|	10
11	|	|	SPARE						0				SPARE	|	|	12
13	|	|	SPARE				0						SPARE	|	|	14
15	|	|	SPARE					0					SPARE	|	|	16
17	1	20	SPARE						0				SPARE	1	20	18
19	1	50	50A REC #1 BELOW PANEL			3,750	3,750						SPACE	1		20
21	1	50	50A REC #2 BELOW PANEL			3,750		3,750						|	|	22
23	1	50	50A REC #3 BELOW PANEL			3,750			3,750					|	|	24
25	1	50	50A REC #4 BELOW PANEL			3,750	3,750							|	|	26
27	1		SPACE					0						|	|	28
29	|	|	|						0				|	|	30
31	|	|	|				0						|	|	32
33	|	|	|					0					|	|	34
35	|	|	|						0				|	|	36
37	|	|	|				0						|	|	38
39	|	|	|					0					|	|	40
41	1		SPACE						0				SPACE	1		42
							7,500	4,950	4,950							

TOTAL CONNECTED LOAD: 17,400 VA 48 AMPS
CALCULATED FEEDER DEMAND, NEC 220: 17,400 VA 48 AMPS FEEDER: 4 #4/0, 1 #2 GND, 2-1/2" C

NEW PANEL 'D'
TYPE 'NQOD', BOLT ON
3 POLE 225 AMP MAIN LUGS

10,000 A.I.C., FULLY RATED
120/208 VOLT, 3 PHASE, 4 WIRE
SURFACE MOUNTED

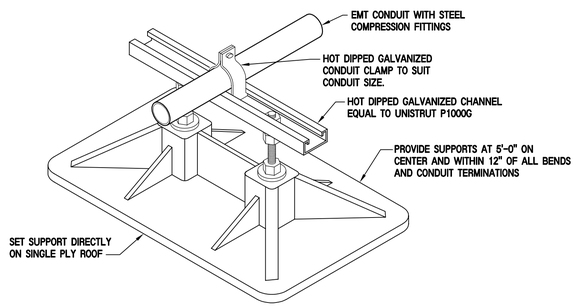
CIR NO.	BRKR P	BRKR AMPS	DESCRIPTION	NO. LTS	NO. REC	CIRCUIT LOAD	PHASE LOAD - VA PHASE A	PHASE B	PHASE C	CIRCUIT LOAD	NO. REC	NO. LTS	DESCRIPTION	BRKR P	BRKR AMPS	CIR NO.
1	1	20	SPARE				0						SPARE	1	20	2
3	|	|	REC BELOW PANEL		1	1,200		1,200					SPARE	|	|	4
5	|	|	REC BELOW PANEL		1	1,200			1,200				SPARE	|	|	6
7	|	|	SPARE				0						SPARE	|	|	8
9	|	|	SPARE					0					SPARE	|	|	10
11	|	|	SPARE						0				SPARE	|	|	12
13	|	|	SPARE				0						SPARE	|	|	14
15	|	|	SPARE					0					SPARE	|	|	16
17	1	20	SPARE						0				SPARE	1	20	18
19	1	50	50A REC #1 BELOW PANEL			3,750	3,750						SPACE	1		20
21	1	50	50A REC #2 BELOW PANEL			3,750		3,750						|	|	22
23	1	50	50A REC #3 BELOW PANEL			3,750			3,750					|	|	24
25	1	50	50A REC #4 BELOW PANEL			3,750	3,750							|	|	26
27	1		SPACE					0						|	|	28
29	|	|	|						0				|	|	30
31	|	|	|				0						|	|	32
33	|	|	|					0					|	|	34
35	|	|	|						0				|	|	36
37	|	|	|				0						|	|	38
39	|	|	|					0					|	|	40
41	1		SPACE						0				SPACE	1		42
							7,500	4,950	4,950							

TOTAL CONNECTED LOAD: 17,400 VA 48 AMPS
CALCULATED FEEDER DEMAND, NEC 220: 17,400 VA 48 AMPS FEEDER: 4 #4/0, 1 #2 GND, 2-1/2" C

EQUIPMENT SCHEDULE

EQUIP. NO.	DESCRIPTION	CIRCUIT NUMBER	VOLTS	PHASE	WATTS H.P.	BREAKER	STARTERS FURNISH	STARTERS INSTALL	STARTERS SIZE	AUX. CONT.	LOCATION
RTU 1	ROOFTOP AIR CONDITIONER	M-40	208	1	35.6 AMPS	2P-50A	M	M	M	-	ON LOW ROOF (CLASSROOMS)
FC 1	SPLIT SYSTEM INDOOR UNIT	M-2	120	1	0.7 AMPS	1P-15A	M	M	M	-	CLASSROOM
FC 2	SPLIT SYSTEM INDOOR UNIT	M-2	120	1	0.7 AMPS	1P-15A	M	M	M	-	TRAINING OFFICE
FC 3	SPLIT SYSTEM INDOOR UNIT	M-2	120	1	0.7 AMPS	1P-15A	M	M	M	-	CORNER OFFICE
FC 4	SPLIT SYSTEM INDOOR UNIT	M-2	120	1	0.7 AMPS	1P-15A	M	M	M	-	ADMIN OFFICE
FC 5	SPLIT SYSTEM INDOOR UNIT	M-4	120	1	0.7 AMPS	1P-15A	M	M	M	-	1SG OFFICE
FC 6	SPLIT SYSTEM INDOOR UNIT	M-4	120	1	0.7 AMPS	1P-15A	M	M	M	-	CDR OFFICE
FC 7	SPLIT SYSTEM INDOOR UNIT	M-4	120	1	0.7 AMPS	1P-15A	M	M	M	-	INTERIOR OFFICE
FC 8	SPLIT SYSTEM INDOOR UNIT	M-4	120	1	0.7 AMPS	1P-15A	M	M	M	-	MAINT OFFICE
FC 9	SPLIT SYSTEM INDOOR UNIT	M-1	120	1	0.7 AMPS	1P-15A	M	M	M	-	WEST SUPPLY ROOM
FC 10	SPLIT SYSTEM INDOOR UNIT	M-1	120	1	0.7 AMPS	1P-15A	M	M	M	-	NBC ROOM
FC 11	SPLIT SYSTEM INDOOR UNIT	M-1	120	1	0.7 AMPS	1P-15A	M	M	M	-	PLT ROOM
FC 12	SPLIT SYSTEM INDOOR UNIT	M-1	120	1	0.7 AMPS	1P-15A	M	M	M	-	TECH ROOM
FC 13	SPLIT SYSTEM INDOOR UNIT	M-1	120	1	0.7 AMPS	1P-15A	M	M	M	-	WEST SUPPLY ROOM
CU 1	AIR COOLED CONDENSING UNIT	M-24	208	1	12.75 AMPS	2P-20A	M	M	M	-	ON ROOF (CLASS ROOM)
CU 2	AIR COOLED CONDENSING UNIT	M-20	208	1	12.75 AMPS	2P-20A	M	M	M	-	ON LOW ROOF (TRAINING OFFICE)
CU 3	AIR COOLED CONDENSING UNIT	M-16	208	1	9.55 AMPS	2P-15A	M	M	M	-	ON LOW ROOF (CORNER OFFICE)
CU 4	AIR COOLED CONDENSING UNIT	M-12	208	1	9.55 AMPS	2P-15A	M	M	M	-	ON LOW ROOF (ADMIN OFFICE)
CU 5	AIR COOLED CONDENSING UNIT	M-28	208	1	9.55 AMPS	2P-15A	M	M	M	-	ON LOW ROOF (1SG OFFICE)
CU 6	AIR COOLED CONDENSING UNIT	M-32	208	1	9.55 AMPS	2P-15A	M	M	M	-	ON LOW ROOF (CDR OFFICE)
CU 7	AIR COOLED CONDENSING UNIT	M-36	208	1	9.55 AMPS	2P-15A	M	M	M	-	ON LOW ROOF (INTERIOR OFFICE)
CU 8	AIR COOLED CONDENSING UNIT	M-33	208	1	9.55 AMPS	2P-15A	M	M	M	-	ON LOW ROOF (MAINT OFFICE)
CU 9	AIR COOLED CONDENSING UNIT	M-25	208	1	12.75 AMPS	2P-20A	M	M	M	-	ON LOW ROOF (EAST SUPPLY ROOM)
CU 10	AIR COOLED CONDENSING UNIT	M-21	208	1	9.55 AMPS	2P-15A	M	M	M	-	ON LOW ROOF (NBC ROOM)
CU 11	AIR COOLED CONDENSING UNIT	M-17	208	1	9.55 AMPS	2P-15A	M	M	M	-	ON LOW ROOF (PLT ROOM)
CU 12	AIR COOLED CONDENSING UNIT	M-13	208	1	9.55 AMPS	2P-15A	M	M	M	-	ON LOW ROOF (TECH ROOM)
CU 13	AIR COOLED CONDENSING UNIT	M-29	208	1	12.75 AMPS	2P-20A	M	M	M	-	ON LOW ROOF (WEST SUPPLY ROOM)
HV 1	EXISTING HEATING & VENT. UNIT PROVIDE NEW MOTOR & STARTER	LDP-1	208	3	2 HP VERIFY	3P-15A	E	E	1	2 N.O. 2 N.C.	DRILL HALL, EAST END
HV 2	EXISTING HEATING & VENT. UNIT PROVIDE NEW MOTOR & STARTER	LDP-2	208	3	2 HP VERIFY	3P-15A	E	E	1	2 N.O. 2 N.C.	DRILL HALL, WEST END

E - ELECTRICAL CONTRACTOR
M - MECHANICAL CONTRACTOR



A5 CONDUIT SUPPORT ON ROOF DETAIL
NOT TO SCALE

State of Utah
Department of Administrative Services

Division of Facilities Construction & Management
4110 State Office Building
Salt Lake City, Utah 84114
Phone: (801) 538 - 3018
Fax: (801) 538 - 3267

Internet: http://www.dfcm.state.ut.us

CONSULTANTS

WHW ENGINEERING INC.
PROFESSIONAL MECHANICAL ENGINEERING
1354 East 3300 South Suite 200
SALT LAKE CITY, UTAH 84106
(801)466-4021, FAX 466-8536
EMAIL: excellence@whwengineering.com

ELECTRICAL
Thomas and Kolkman Engineering Co. Inc.
64 West 1700 South
Salt Lake City, Utah 84115
Ph#: (801) 484-8161 Fax: (801) 484-3538

PROJECT NAME & ADDRESS

LEHI NATIONAL GUARD COOLING ADDITION

DFCM No. 05122470

300 EAST MAIN STREET
LEHI, UTAH 84043

MARK	DATE	REVISION

PROJECT MANAGER: SLW
DRAWN BY: W.B.G.
CHECKED BY: R.G.K.
DATE: 1/10/06
WHW JOB NO.: 05034

REGISTERED PROFESSIONAL ENGINEER
RAYMOND G. KOLKMAN
175780
1/10/06
STATE OF UTAH

SHEET TITLE
SCHEDULES AND DETAILS

SHEET NO.
E-602